

REMARKS

The last Office Action has been carefully considered.

It is noted that claims 1-3, 10 and 11 are rejected under 35 U.S.C. 102(b) or 103(a) over the patent to Fourie.

Claim 4 is rejected under 35 U.S.C. 103(a) over the patent to Fourie.

At the same time the Examiner indicated that claims 5-9 were not rejected over the art.

The Examiner's indication of the allowability of some claims has been gratefully acknowledged. In connection with this indication claims 5 and 6 have been canceled and claims 12 and 13 have been submitted which include the features of the canceled claims and are independent claims. It is believed that claims 12 and 13 together with claims 7 and 8 which depend on claim 13 are now in allowable condition.

At the same time, claim 1, the broadest claim on file, has been amended to more clearly define the present invention and distinguish it from the prior art.

Turning now to the Examiner's rejection of the claims, it is respectfully submitted that the bending processes which are disclosed in the prior art for producing wheels (NL'040) or springs (US'894) are used for producing products having a constant radius over its entire length. Such processes are not usable for producing spring bands for flat blade shield wipers, as such spring bands show a variation curvature of their entire length. This curvature must be predetermined in dependence on the windshield to be wiped, as can be seen from Figure 3, in which the windshield is shown as a dotted line 44. Therefore, the windshield wiper must keep its curvature over a long period of time in order to produce good wiping quality.

The reference NL'040 shows a device for the production of bicycle wheel rims from a straight profile, so that it is clear that after the bending process, the two ends of the bent profile are joined together. Therefore, the radius of this profile is constant and remains constant over a long period of time.



U.S. patent document '894 discloses a method of making springs and a device comprising two pairs of four rolls. Each pair of the four rolls is arranged such that they produced spring leaves with a constant radius. Thereby the first rows are arranged such that they give a positive band to a radius less than the desired and on passing through this given a negative or straightening action between the next rows to a radius greater than that finally desired. To adjust the first and the second desired radius, two of those are justable by means of a rod which is engaged by a threaded handwheel. Therefore, when the rows are once adjusted for the desired radius, they are fixed during the bending process. There is no possibility to change in the degree of the curvature during the bending process in order to give a spring leaf a varying curvature over its length.

In contrast, in accordance with the applicant's invention during the bending process the degree of curvature is changed in order to give a flat spring leaf a bearing curvature over its different radii over its length.

This feature is not disclosed in the prior art and can not be derived from it as a matter of obviousness.



This feature is explained on page 4 fourth and third line of the specification.

The patent to Fourie '672 does not disclose a method of producing flat blade windshield wipers for motor vehicles with curved flat blades, neither as claimed in the original claim 1 nor as claimed in the amended claim 1. The patent to Fourie discloses only a method and an apparatus for producing beams having a thickness which varies along their length. The real bending process giving the beam a curvature over its length follows after the process disclosed in the patent to Fourie. It may be that during the process disclosed in the patent to Fourie the beam will be bent in different directions, but not to produce "curved flat blades" as defined in claim 1. Therefore, the patent to Fourie can neither anticipate nor make obvious a method of producing flat blade windshield wipers with curved flat blades. Such an interpretation of the patent to Fourie is possible only when a person familiarizes himself with knowledge of the present invention. However, this is a hindsight which is not a justifiable reason for rejection.

In view of the above remarks and amendments, it is believed that claim 1, the broadest claim on file, should be considered as patentably distinguishing over the art and should be allowed.




As for the dependent claims, these claims depend on claim 1, they share its presumably allowable features, and therefore it is respectfully submitted that they should be allowed as well.

Reconsideration and allowance of present application is most respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place this case in condition for final allowance, then it is respectfully requested that such amendments or corrections be carried out by Examiner's Amendment, and the case be passed to issue. Any costs involved should be charged to the deposit account of the undersigned (No. 19-4675). Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, he is invited to telephone the undersigned (at 631-549-4700).

Respectfully submitted,


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CLAIMS

Amend the following claims:

1. A method of producing flat-blade windshield wipers for motor vehicles with curved flat blades, the method comprising the steps of:
feeding a spring band formed of a plurality of flat blades arranged one next to another in a direction of elongation of said spring band through feed rolls and guide rolls;

bending said spring band in one transversal direction between three support sites spaced from each other in a direction of feeding of said spring band and resting successively in an alternating manner on one of two sides of said spring band;

re-bending said spring band in another transversal direction opposite to said one transversal direction in a fourth support site arranged subsequently to said three support sites by a degree of re-bending lower than a bending degree in said bending step;

adjusting a degree of bending during a bending process to realize different bending radii within one flat blade;

separating each individual flat blade of a re-bent spring band
from a remaining spring band;

combining each individual flat blade with a rubber-elastic
wiping bar;

and mounting to said re-bent flat blade combined with said wiping bar a
connection device for a wiper arm.



Amended claim 1:

1. A method of producing flat-blade windshield wipers for motor vehicles with curved flat blades, the method comprising the steps of:

feeding a spring band formed of a plurality of flat blades arranged one

next to another in a direction of elongation of said spring band through feed rolls and guide rolls;

bending said spring band in one transversal direction between three

support sites spaced from each other in a direction of feeding of said spring band and resting successively in an alternating manner on one of two sides of said spring band;

re-bending said spring band in another transversal direction opposite to said one transversal direction in a fourth support site arranged subsequently to said three support sites by a degree of re-bending lower than a bending degree in said bending step;

adjusting a degree of bending during a bending process to realize different bending radii within one flat blade;

separating each individual flat blade of a re-bent spring band from a remaining spring band;

combining each individual flat blade with a rubber-elastic

wiping bar;

and mounting to said re-bent flat blade combined with said wiping bar a

connection device for a wiper arm.
